

Loss Allocation Principles

- Accurate and reflect cost causation
- Easy to understand, simple to administer and reasonably predictable
- Increased complexity should be offset by increased benefits
- Consistent for all system users
- Consistent with market design – injection/withdrawal
- Under RTO Control – tariff not TOA issue

Areas of Agreement

- Loss allocation is for cost recovery not congestion management
- Ex ante loss factors preferred
- Settlement of undelivered losses will be at real time imbalance prices
- Day ahead loss factors will be fixed through real time
- Loss allocation should not require more meters than are needed for settlement

Areas of Agreement (cont)

- Any discrepancies between allocated and actual losses will be recovered as unaccounted for energy
- PTOs will be responsible for recovering losses from non-converted contracts
- Losses method should be transparent

Issues Still Open

- Allocation to load or resources
- Granularity – geographical and time
 - Nodes versus zones
 - Frequency of changing loss factors
 - Horizon for loss factors
- Volatility and predictability
 - Accuracy versus commercial simplicity

Transition Issues

- Potential cost shifts
- Tactical issue about whether to start with ex post or ex ante

Options Considered

- Locational - Marginal
 - Allocated to resources
- Zonal losses
 - Applied to load
- System average loss factors
 - Same for everyone
- SC specific loss factors
 - Reflects non-converted contracts

Not Recommended

- *System Average*
 - *Would cause cost shift*
 - *Fails to account for RTO West size*
- *SC Specific*
 - *Function of contract status, not physical reality*
 - *Comparability issue*

Recommended Option 1: Zonal losses

- *Losses calculated using load flow for pre-designated load zones*
- *Loss allocation based on flow into and through zones*
- *Allocated to load and exports within zones*
- *Favors ex post, can be ex ante*
- *Can be allocated over any granularity*
- *Volatility/predictability depend on granularity*
- *Consistent with principles*

Zonal Pros & Cons

- Uses load flow based on actual or expected conditions
- Does not rely on marginal calculation
- Flexible size of allocation area
- Not accurate to bus level
- Does not account for schedule difference within zone
- Potential ability for RTO to manipulate loss calculation
- Requires region-wide analysis for accuracy

Locational Marginal

- *Losses calculated for each injection point and system condition*
- *Allocation based on marginal impact, scaled to actual losses*
- *Allocated to resources*
- *Can be done ex post or ex ante*
- *Can be allocated over any granularity*
- *Volatility/predictability depend on granularity*
- *Consistent with principles*

Locational Pros&Cons

- Provides direct locational signals to resources
- Consistent with LMP
- Could over-allocate losses to remote resources (and benefit those in load center)
- Potentially more volatile

Zonal allocation example